



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,509	03/02/2004	Roy Peterson	PHUS030058	2778

28159 7590 11/29/2007

PHILIPS MEDICAL SYSTEMS  
PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3003  
22100 BOTHELL EVERETT HIGHWAY  
BOTHELL, WA 98041-3003

EXAMINER
----------

CATTUNGAL, SANJAY

ART UNIT	PAPER NUMBER
----------	--------------

3768

MAIL DATE	DELIVERY MODE
-----------	---------------

11/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/791,509

Applicant(s)

PETERSON ET AL.

Examiner

Sanjay Cattungal

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed 09/13/2007, with respect to the rejection(s) of claim(s) 1-24 under Section 102 and 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. **Claim 1, is rejected under 35 U.S.C. 102(e) as being anticipated by U. S.**

**Publication No. 2004/0015104, Application No. 10/364,143 to Goldberger**

2. Regarding **Claim 1**, Goldberger teaches an ultrasonic therapeutic system probe comprising: an ultrasonic transducer array (Paragraph 0025); an integrated circuit (Paragraph 0029) coupled to the ultrasonic transducer array which acts to process or control transducer array signals (Paragraph 0029); and a fuel cell coupled to the integrated circuit for energizing the integrated circuit; and a source of fuel coupled to the fuel cell.(Paragraph 0028)

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 2 and 3, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Publication No. 2004/0015104, Application No. 10/364,143 to Goldberger in view of U. S. Patent No. 5,817,024 to Ogle et al.**

5. Regarding **Claims 2 and 3**, Goldberger teaches all of the above claimed limitations but does not expressly teach the use of a transceiver and beamformer circuit.

6. Ogle teaches the use of a transceiver and beamformer circuit. (Abstract)

7. It would have been obvious to one of ordinary skill in the art to modify Goldberger with a transceiver and beamformer circuit as taught by Ogle, since such a setup would result in the system being used for medical imaging.

8. **Claims 4-9, , are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Publication No. 2004/0015104, U. S. Application No. 10/364,143 to Goldberger in view of U. S. Patent No. 7,005,206 to Lawrence et al.**

Regarding **Claims 4-9**, Goldberger teaches all of the above claimed limitations but does not expressly teach a power converter, coupled to the fuel cell, which produces a stepped up voltage level in response to the power level produced by the fuel cell.

Lawrence teaches use of a voltage boost converter circuit. (Fig. 13 a-2)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Smith with a voltage boost converter as taught by Lawrence since a boost converter is primarily responsible for boosting the fuel cell voltage to a higher voltage level and for supplying charge to capacitive and battery storage devices within the circuit. (Col. 15 lines 33-36)

9. Regarding **Claims 5**, Lawrence teaches a capacitor, coupled to the output of the fuel cell, which acts to store energy for peak load conditions. (Col. 18 lines 34-43)

10. Regarding **Claims 6, 7**, Lawrence teaches that the source of fuel comprises a replaceable fuel cartridge or ampule, wherein the fuel cartridge or ampule contains a methanol- or alcohol-based fuel. (Abstract and Claim 1)

11. Regarding **Claims 8, 9**, Lawrence teaches that the fuel cell further comprises an anode, a cathode, and an ion exchange membrane located between the anode and the cathode. (Abstract)

12. **Claims 10-24, , are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 5,817,024 to Ogle et al. in view of U. S. Publication No. 2004/0015104, Application No. 10/364,143 to Goldberger and further in view of U. S. Patent No. 7,005,206 to Lawrence et al.**

13. Regarding **Claims 10-14 and 19-24**, Ogle teaches a handheld ultrasonic comprising: an ultrasonic transducer array probe (Claim 1); an ultrasound signal processor coupled to receive signals from the array probe (Claim 1); an ultrasound image processor coupled to receive signals from the signal processor; an image display

(Fig. 1 element 60) coupled to the image processor which acts to display images produced by the image processor.

14. Ogle teaches the use of a power and battery system but doesnot expressly teach the use of Fuel cells.

15. Goldberger teaches the use of Fuel cells in Ultrasound systems.

16. It would have been obvious to one of ordinary skill in the art to modify Ogle with fuel cells as taught by Goldberger since such a setup would result in more efficient and reliable power source.

17. Ogle and Goldberger teach all'of the above claimed limitations but do not expressly teach that the fuel cells are capable to be used in handheld devices.

18. Lawrence teaches the use of fuel cells in hand held devices. (Claim 1)

19. It would have been obvious to one of ordinary skill in the art to modify Ogle and Goldberger with a setup for using fuel cells in handheld devices as taught by Lawrence since such a setup would make the system more mobile.

20. Regarding **Claim 15**, Lawrence teaches a capacitor, coupled to the output of the fuel cell, which acts to store energy for peak load conditions. (Col. 18 lines 34-43)

21. Regarding **Claim 16**, Lawrence teaches that the source of fuel comprises a replaceable fuel cartridge or ampule, wherein the fuel cartridge or ampule contains a methanol- or alcohol-based fuel. (Abstract and Claim 1)

22. Regarding **Claims 17 and 18**, Lawrence teaches that the fuel cell further comprises an anode, a cathode, and an ion exchange membrane located between the anode and the cathode. (Abstract)

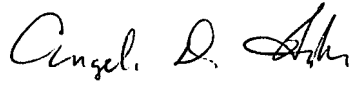
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanjay Cattungal whose telephone number is (571)272-1306. The examiner can normally be reached on 9:30 - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571)272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPC

  
ANGELA D. SYKES  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700